Wattbike Performance Computer

Contents

The Wattbike Performance Computer features: 3

Just ride 4

TEXT MODES 4

GRAPH MODES 6

Workout 8

Workout 8

- Last workout 8
- Standard 8
- ReRide 8
- Custom 9
- New workout 9

Recall 11

Recall – Text Mode 11

Recall – Graphical Mode 12

Setup 14

Heart Rate Monitor Interface 15

Peak Power Test 16

Battery 16

Sockets 16

The Wattbike Performance Computer features:

- **Accurate tracking of performance data – Time (h:m:s), 1km Pace (m:s), Speed (km/h), Energy (Joules) and Power (Watts),**
- **Four Text modes – Speed (/1km), Speed (km/h), Energy (J), Power (Watt).**
- **Three Graph modes – Polar-Graph (Force Curve), Signal-Graph (Force Curve [N]) and Bar-Graph (Speed [km/h], Power [W] and Energy [J])**
- **Heart Rate Monitoring – integrated heart rate display for Polar ANT/ANT+SPORT wireless technology**
- **Power generation – this draws power from the cycling to extend the battery life**
- **USB Interface – transfer of data to PC**

Operating the Wattbike is very easy. Simply sit on the Wattbike, turn the **Performance Computer** on, from the **Main menu** select **Just ride**, press **ENTER** and start pedaling and the **Performance Computer** will give immediate feedback. Use the **ESC** key to get back through the display screens to the **Main menu**.

The **Performance Computer** turns off after 4 minutes if inactive.

There are seven basic screens, 4 **Text** Modes and 3 **Graph** Modes:

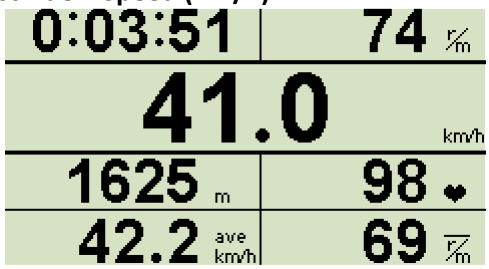
Just ride

During a workout the parameters can be shown in 4 different **Text** Modes. Scroll round the **Text** Modes using the **up/down** keys on the **Performance Computer**.

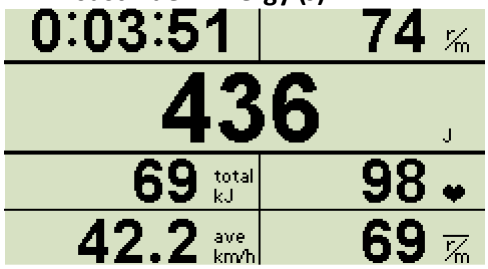
TEXT MODES

Just ride – Speed (Pace/1km)

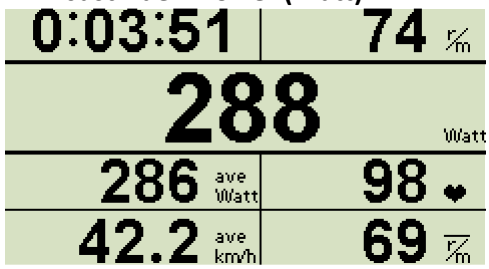
Just ride – Speed (Km/h)



Just ride – Energy (J)



Just ride – Power (Watt)



The top portion of the display is standard across all 4 **Text** Modes.

- **Top left is Time elapsed (0:00:00)**
- **Top right is cadence (r/m)**

The second row and largest portion of the display shows the major units in each mode.

- **Pace (/1km)**
- **Speed (km/h)**
- **Energy (J)**
- **Power (Watt)**

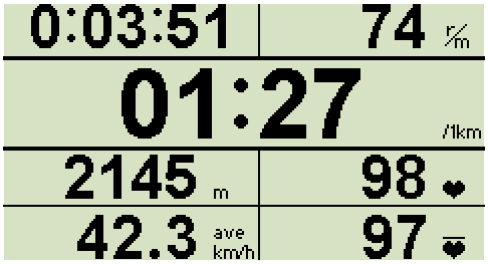
The left hand side of the third row displays average and total units.

- **Total distance (m) – with Pace and Speed display**
- **Total energy (total kJ) – with Energy display**
- **Average power (ave Watt) – with Watts display**

The right hand side of the third row displays the current heart rate (beats/min).

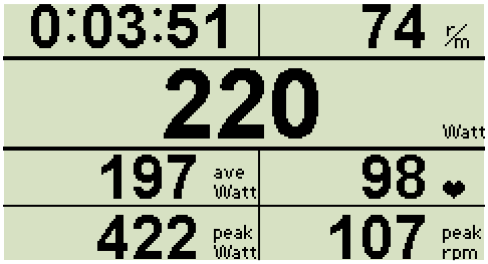
The bottom row displays:

- **Average speed (km/h) on the left hand side**
- **Average cadence (r/m) on the right hand side OR after pressing the ENTER button the Average HR (beats/min)**



Pressing **ENTER** again will display:

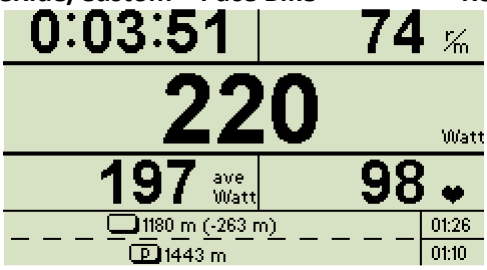
- **peak Watt on the left hand side**
- **peak rpm on the right hand side**



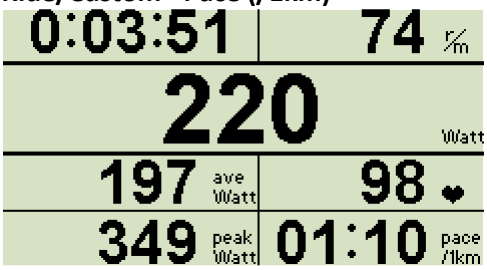
In a **ReRide** or **Custom** workout by pressing **ENTER** the bottom row also displays:

- **Pace bike, +/- metres (m) ahead/behind pace bike, pace required (/1km), actual pace (/1km) OR after pressing ENTER again peak Watt on the left hand side and pace required (/1km) on the right hand side**

ReRide/Custom – Pace Bike



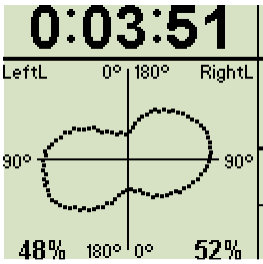
ReRide/Custom - Pace (/1km)



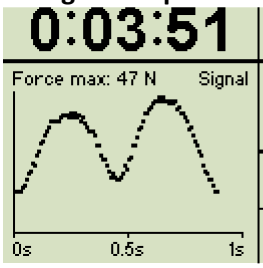
GRAPH MODES

Parameters can also be shown in 3 **Graph** Modes:

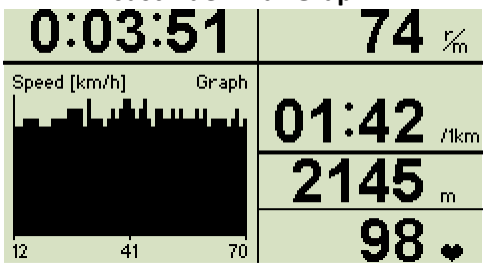
Just ride – Polar Graph



Just ride – Signal Graph



Just ride – Bar Graph



NOTE – The **Polar** graph shows t*he peak force profile of the left and right leg down stroke:*

- *the left hand side is the left leg down stroke starting at the top of the graph (12 o'clock position) and finishing at the bottom of the graph (6 o'clock position)*

- *the right hand side is the right leg down stroke starting at the bottom of the graph (6 o'clock position) and finishing at the top of the graph (12 o'clock position)*

Left and right leg symmetry %

As with the top of the 4 standard **Text** Modes the top portion of the display is standard across all 3 **Graph** Modes.

- **Top left is Time elapsed (0:00:00)**
- **Top right is cadence (r/m)**

On the left hand side of each graphic display are graphs in **Polar** (Force Curve – left leg/right leg [%]), **Signal** (Force Curve [N]) and **Bar** (Speed [km/h], Energy [J], Power [W]) form.

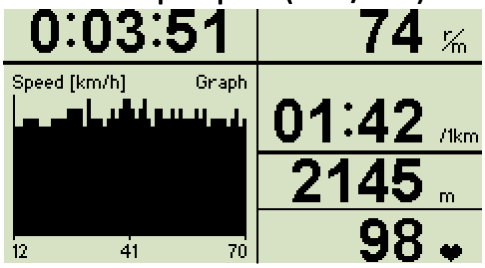
The right hand side of the second row displays the major units in each mode.

- **Pace (/1km)**
- **Power (Watt)**
- **Energy (J)**
- **Speed (km/h)**

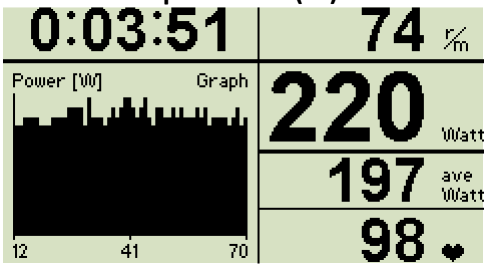
These fields loop within each graphic display by pressing the **ENTER** button and within the graphs by pressing the **up/down** keys.

The **Polar** and **Signal** Graphs are available in all 4 **Text** modes, **Bar** Graphs are available for **Speed [km/h]** (with **Pace /1km** and **Speed km/h Text** mode), **Energy [J]** and **Power [W]**.

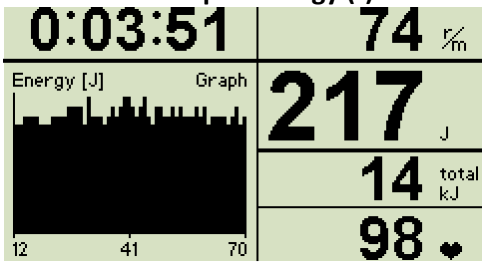
Just ride – Bar-Graph–Speed (Pace/1km)



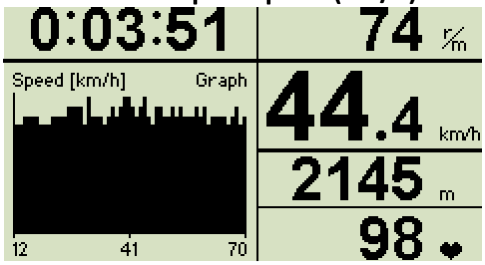
Just ride – Bar Graph–Power (W)



Just ride – Bar Graph - Energy (J)



Just ride – Bar Graph – Speed (km/h)



The third row displays the average and total units.

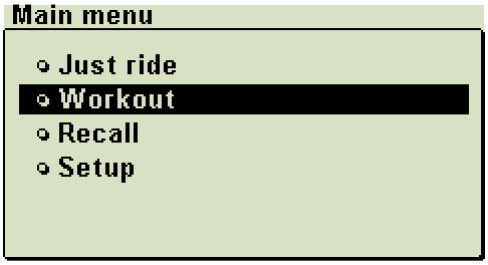
- **Total Distance (m) – with Pace (/1km) and Speed (km/h) display**
- **Average Power (ave Watt) – with Watt display**
- **Total Energy (total kJ) – with Energy (J) display**

These fields also loop within each graphic display by pressing the **ENTER** button.

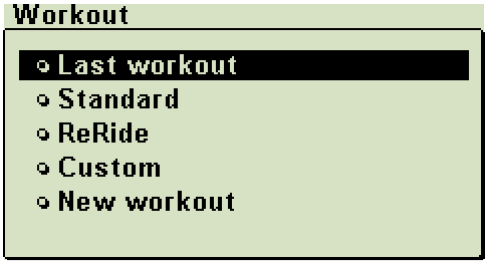
The bottom right hand field displays the current Heart Rate (beats/min).

Workout

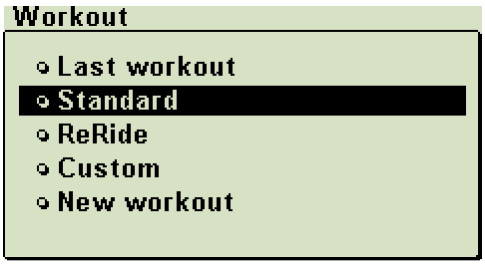
From the **Main Menu** select **Workout** and press **ENTER** - The **Workout** feature offers a variety of workout options. Use the **up/down** keys on the **Performance Computer** to scroll through the displays and **ENTER** to select an option.

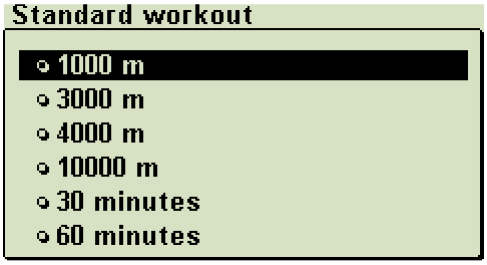


- **Last workout** – this repeats the last workout completed.

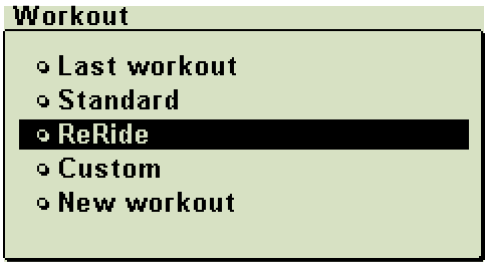


- **Standard** – offers a choice of six pre programmed workouts.
  - 1000 m
  - 3000 m
  - 4000 m
  - 10000 m
  - 30 minutes
  - 60 minutes





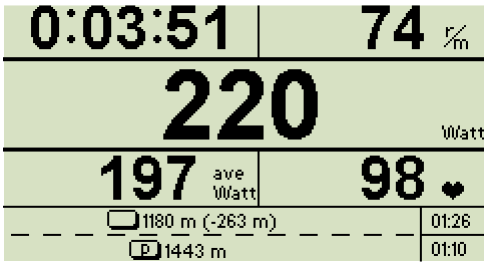
- **ReRide** – enables racing against a previous workout.



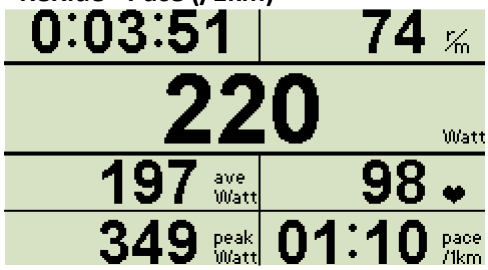
In **ReRide** the pace bike will be displayed at the bottom of the screen and show +/- metres (m) ahead/behind the pace bike, actual pace and pace /1km required. During a **ReRide**

workout press **ENTER** and the pace required (/1km) will be shown in the bottom right of the display.

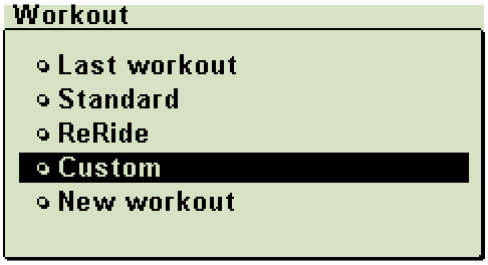
ReRide - Pace Bike



ReRide - Pace (/1km)

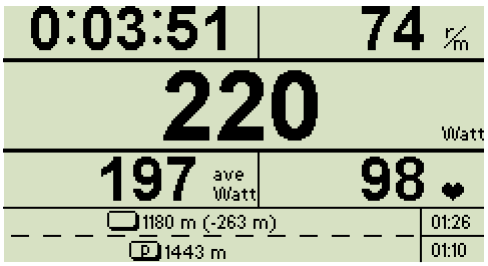


- **Custom** – allows selection from 6 of user created own workouts that are created in **New workout**.

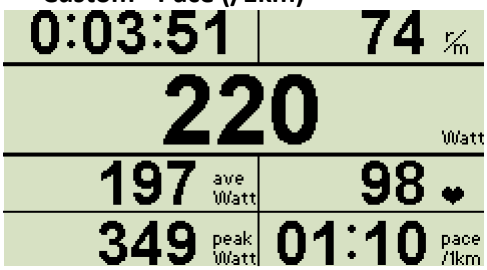


The **Custom** workout display will hold the pace bike at the custom pace (/1km) and show +/- metres (m) ahead/behind the pace bike, actual pace and custom pace. During a **Custom** workout press **ENTER** and the custom pace (/1km) will be shown in the bottom right of the display.

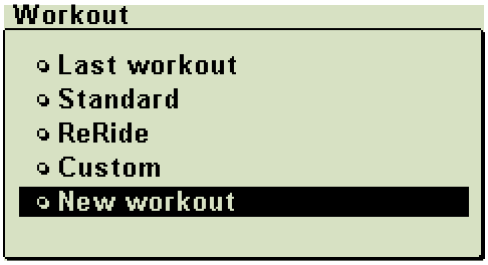
Custom - Pace Bike



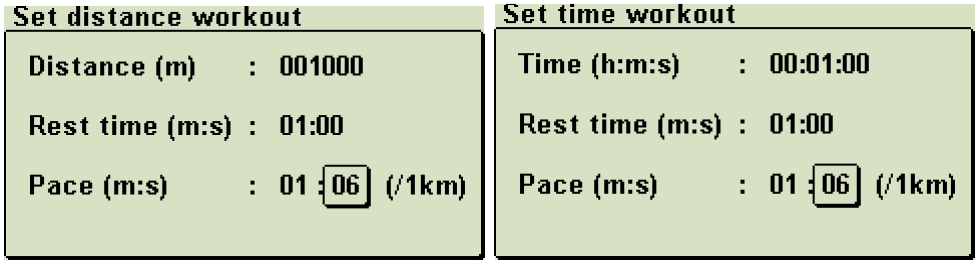
Custom - Pace (/1km)



- **New workout** – used to create a **Custom** workout.



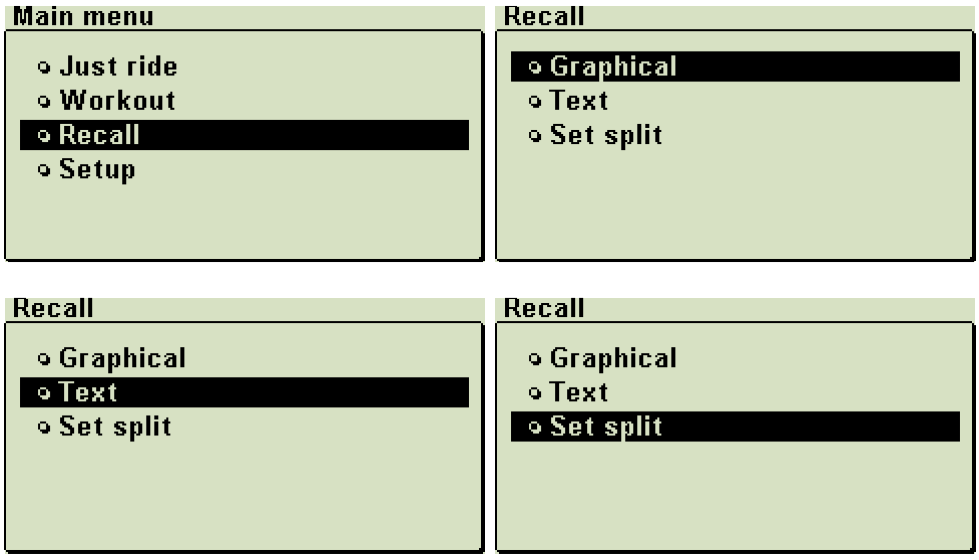
In **New workout** mode you can set the pace (/1km) required and set a workout by distance (m) or time (h:m:s). Use the **ENTER** button to scroll across the units and the **up/down** keys to set the units.


Set distance workout
Distance (m) : 001000
Rest time (m:s) : 01:00
Pace (m:s) : 01 : 06 (/1km)
Set time workout
Time (h:m:s) : 00:01:00
Rest time (m:s) : 01:00
Pace (m:s) : 01 : 06 (/1km)

Recall

After finishing a **Just ride**, **Standard**, **ReRide** or **Custom** workout the **Recall** of the workout **Summary** is displayed automatically.

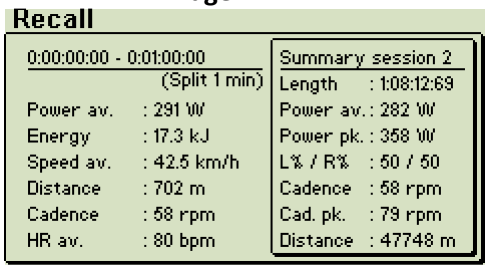
To see a saved workout press **ENTER** after accessing **Recall** in the **Main menu** - Each workout can be reviewed in **Graphical** or **Text** mode and pre-defined split intervals can be set in **Set split**. The split intervals can be set in increments of 1 minute within a range of 1-60 minutes with a total recall memory of 1400 minutes.



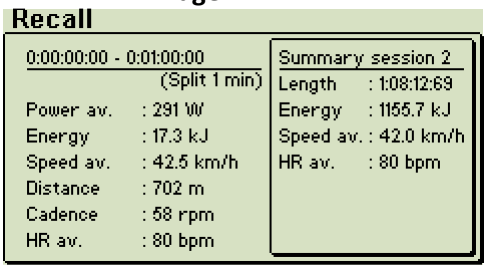
Use the **up/down** keys on the **Performance Computer** to scroll through the displays and **ENTER** to select an option.

Recall – Text Mode

Page 1


Recall
0:00:00:00 - 0:01:00:00
(Split 1 min)
Power av. : 291 W
Energy : 17.3 kJ
Speed av. : 42.5 km/h
Distance : 702 m
Cadence : 58 rpm
HR av. : 80 bpm
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

Page 2



In **Text** mode, on the left hand side of the screen the defined splits of your workout can be viewed and by pressing the **up/down** keys you can scroll through the splits for the workout.

The **Summary** of the workout will remain on the right hand side of the screen.

There are two pages of the **Summary**, simply press **ENTER** to access the second page.

The **Summary** pages show (for the whole session) – Length (of session), Power av., Power pk., L%/R% (left and right leg %), Cadence, Cad. Pk., Distance, Energy (kJ), Speed av., and HR av.

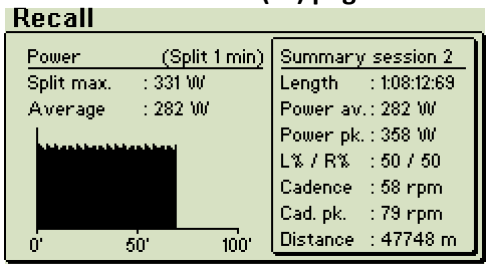
Pressing **ENTER** again will bring you to the **Graphical** mode, on the left hand side of the screen you can view your workout splits as a bar chart for Power, Heart rate, Cadence, Energy, Distance and Speed as well as the split Maximum and Average for the parameter.

To scroll though the splits press the **up/down** keys. The **Summary** of the workout will remain on the right hand side of the screen.

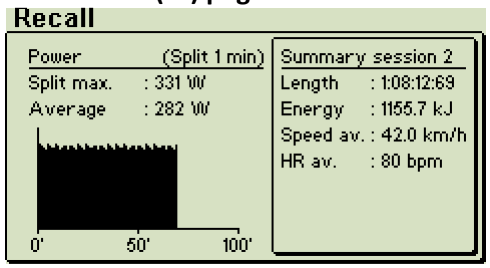
Again as with the **Text** mode there are two pages of the **Summary**, simply press **ENTER** to access the second page.

Recall – Graphical Mode

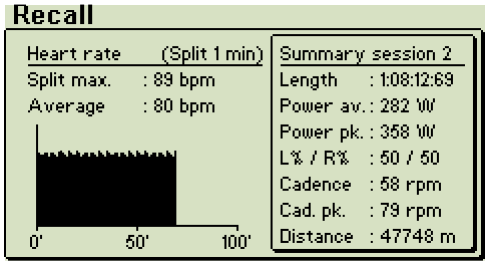
Recall – Power (W) page 1


Recall
Power (Split 1 min)
Split max. : 331 W
Average : 282 W
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

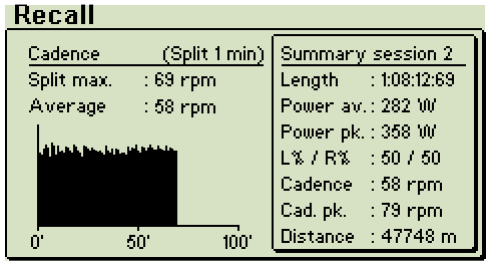
Recall – Power (W) page 2



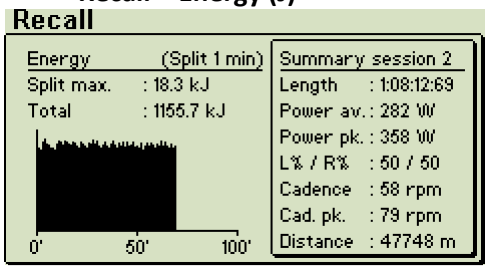
Recall – Heart rate


Recall
Heart rate (Split 1 min)
Split max. : 89 bpm
Average : 80 bpm
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

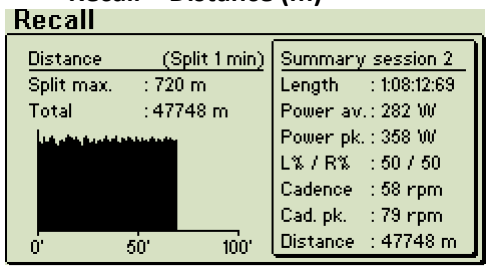
Recall - Cadence


Recall
Cadence (Split 1 min)
Split max. : 69 rpm
Average : 58 rpm
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

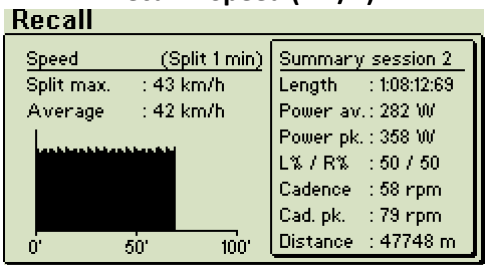
Recall – Energy (J)


Recall
Energy (Split 1 min)
Split max. : 18.3 kJ
Total : 1155.7 kJ
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

Recall – Distance (m)

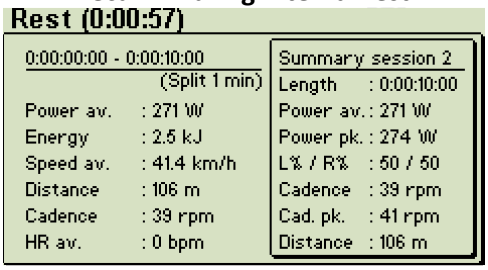

Recall
Distance (Split 1 min)
Split max. : 720 m
Total : 47748 m
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

Recall – Speed (km/h)


Recall
Speed (Split 1 min)
Split max. : 43 km/h
Average : 42 km/h
0' 50' 100'
Summary session 2
Length : 1:08:12:69
Power av. : 282 W
Power pk. : 358 W
L% / R% : 50 / 50
Cadence : 58 rpm
Cad. pk. : 79 rpm
Distance : 47748 m

If you have set a **Custom** workout as an interval session the **Performance Computer** will automatically switch to **Recall Text** mode during the rest interval – you will see the interval rest time counting down in the top left hand corner of the screen.

Recall – During Interval rest

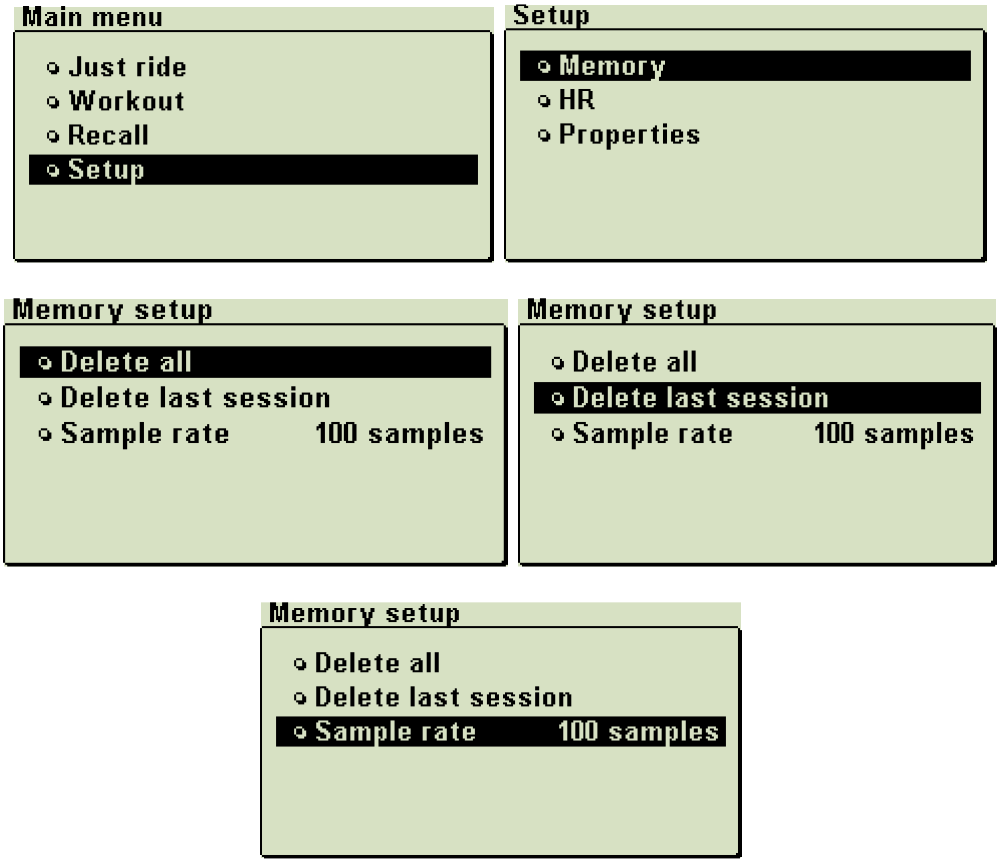

Rest (0:00:57)
0:00:00:00 - 0:00:10:00
(Split 1 min)
Power av. : 271 W
Energy : 2.5 kJ
Speed av. : 41.4 km/h
Distance : 106 m
Cadence : 39 rpm
HR av. : 0 bpm
Summary session 2
Length : 0:00:10:00
Power av. : 271 W
Power pk. : 274 W
L% / R% : 50 / 50
Cadence : 39 rpm
Cad. pk. : 41 rpm
Distance : 106 m

During the rest interval you will be able to switch between **Text** and **Graphical** mode by pressing **ENTER** and use the **up/down** keys to scroll through defined split information.

NOTE: The Wattbike **Performance Computer** only stores 40 sessions and/or 175' of transferable data, irrespective of the length of the sessions and when full deletes the last session first. It is recommended that the data is backed up regularly/recorded live direct to **Wattbike Expert Software**, and the **Memory** cleared regularly.

Setup

From the **Main menu** select **Setup** and press **ENTER** - In **Setup** go into the **Memory** to **Delete all** or **Delete last session** and also to change the **Sample rate** per second to **OFF (**session will not be saved), **25 samples**, **50 samples** or **100 samples**. Use the **up/down** keys on the **Performance Computer** to scroll through the displays and **ENTER** to select an option.



The **Performance Computer** is equipped with 2Mb internal memory which has the capacity to store 175 minutes of data with a resolution of 100 samples per second. It is possible to increase the **Performance Computer's** storage capacity by reducing the sample rate to 50 or 25 samples per second.

Sample rate per second	**Storage capacity in minutes**
100	175
50	350
25	700

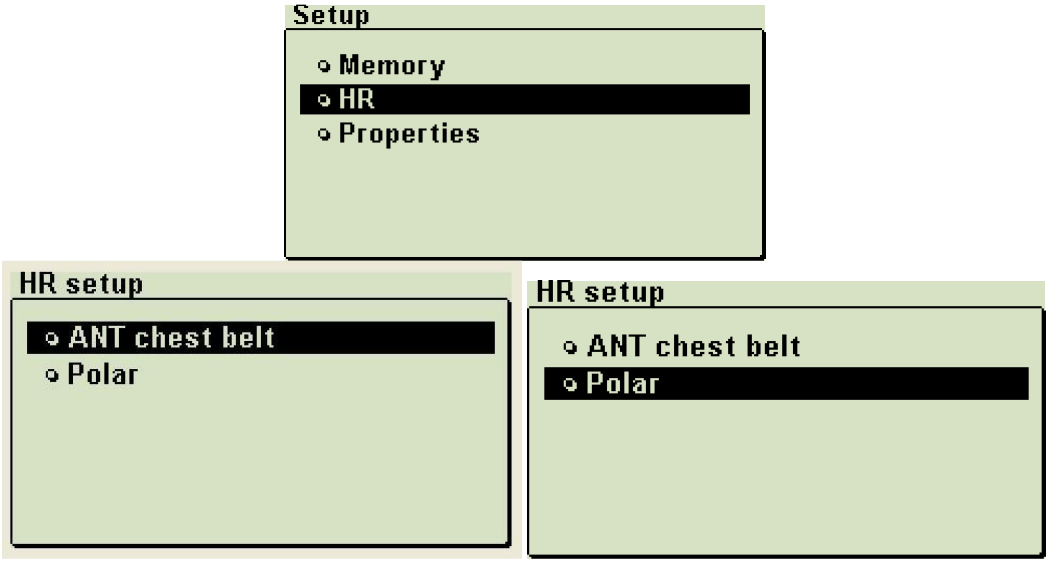
For general workouts the 25 sample setting is appropriate**.** For cycling enthusiasts, professional cyclists, coaches and sports scientists, particularly if using **Wattbike Expert Software** a higher sampling rate may be necessary.

Heart Rate Monitor Interface

Connection to a HR Monitor device is by a Heart Rate Interface cable or ANT/ANT+SPORT wireless technology.

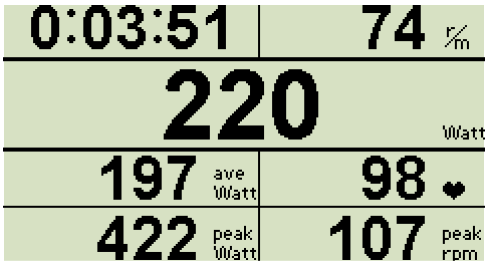
In **Setup** select **HR** and press **ENTER** this goes to the **HR setup** screen, select **ANT chest belt** or **Polar un-coded chest belt** (not forgetting to connect the HR Interface cable for **Polar**) and follow the instructions on screen.

When connected press **ESC** until the screen returns to the **Main menu** – HR will now appear on the **Text** and **Graph** mode screens.



Peak Power Test

The Wattbike has a built in peak power test. In the **Just ride** mode press **ENTER** until **peak Watt** is shown in the bottom left of the screen and **peak rpm** in the bottom right of the screen.



Other display units (**Text** and **Graph** modes) should be set using the **up/down** keys on the **Performance Computer**.

This is a very short test and should take only a few seconds (6).

Battery

The Wattbike is fitted with a generator that recharges the battery when cycling at a cadence over 50 r/m. This means that close to 98% of the working time will be covered with current from the generator. The batteries should be recharged every month using the external battery charger supplied with Wattbike.

You can check the % battery power remaining by selecting **Setup** and then **Properties**. The **Performance Computer** can only operate with the original factory supplied accu-batteries – please contact your Wattbike any battery problems are experienced.

Sockets

There are four sockets on the back of the Wattbike **Performance Computer**:

- **SENSOR** – to connect the **Performance Computer** to the Wattbike
- **CHARGE** – to connect the 12V battery charge adapter
- **HEART RATE** – to connect to a **Polar** heart rate receiver
- **USB** – to connect the Wattbike to a PC
- **RESET** button

The **RESET** button should only be used if the **Performance Computer** displays stops working or shows inconsistent data. **NOTE** – any data saved in the **Memory** will not be lost if the **RESET** button is activated. If in doubt contact Wattbike at info@wattbike.com.